UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,513	11/05/2007	Takao Ikuno	00862.108808.	6679

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FITZPATRICK CELLA HARPER & SCINTO
1290 Avenue of the Americas
NEW YORK, NY 10104-3800

EXAMINER
RUST, ERIC A

ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/598,513	IKUNO ET AL.
Office Action Summary	Examiner	Art Unit	
	ERIC A. RUST	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 February 2011</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,4-7,10-13,16 and 17</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1, 4-7, 10-13, 16, and 17</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March

22, 2010 has been entered.

In the Amendment filed on February 25, 2011, Applicants amended claims 1, 7,

and 13. Claims 1, 4-7, 10-13, and 16-17 are pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 5,943,508 to Penney et al. (hereinafter, Penney) in view of Applicant

Admitted Prior Art (hereinafter, AAPA) and further in view of U.S. Patent No. 6,587,735

B1 to Yaguchi, as evidenced by U.S. Patent Application Publication No. 2008/0028369

A1 to Sasaki et al. (hereinafter, Sasaki).

In regard to claim 1, Penney discloses an image processing apparatus

(**Penney, Fig. 1, and col. 1, lines 49-52**) comprising:

a predetermined number of code converting units (**Penney, Fig. 1, item 14**),

each code converting unit configured to execute coding and decoding of image data,

each code converting unit belonging to one of a plurality of code converting units

(**Penney, col. 2, lines 19-22, and 47-53, the Examiner reads code converting units**

as belonging to their own group, i.e., one code converting unit for each group,

support for a group consisting of one item is disclosed in Sasaki, [0032], line 1);

a plurality of request-source task units (**Penney, Fig. 1, item 11**), the number of

request-source task units being greater than the number of code converting units

(**Penney, col. 2, lines 13-15**) and having priorities set in advance (**Penney, col. 2,**

lines 47-53, one of the outputs of the input matrix is assigned to one of the input

sources, the Examiner interprets this source as having a high priority with the

other sources having lower priority); wherein each request-source task unit having a

high priority reserves one of the predetermined number of code converting units in the

predetermined code converting unit group (**Penney, col. 2, lines 47-53**), and each

request-source task unit having a low priority competes for at least one of a plurality of

non-reserved code converting units in code converting unit groups other that the

predetermined code converting unit group (**Penney, Fig. 1, and col. 2, lines 47-57,**

one of item 14 is reserved, and there are more items 11 than there are items 14,

accordingly, they would have to compete), the number of non-reserved code

converting units being less than the number of request-source task units having the low

priority (**Penney, Fig. 1, there are more items 11 than there are items 14**); and

an assigning unit (**Penney, Fig. 1, item 18**) configured to assign:

i. when one of the plurality of request-source units having the high priority, the

code converting unit reserved by the request-source task unit to a task corresponding to

the request-source task unit (**Penney, col. 2, lines 47-57, resource manager 18**

assures that one of the decoders I coupled to the output for a certain task), and

ii. when one of the plurality of request-source units having the low priority and

one of the plurality of non-reserved code converting units is an idle code converting unit,

the idle code converting unit to the task corresponding to the request-source task unit

that issued the processing request (**Penney, col. 3, lines 13-16, and 46-52, assigned**

as needed).

Penney does not disclose wherein the plurality of request-source task units are

configured to request any of said plurality of code converting units in a predetermined

code converting unit group to perform a code conversion of image data, and that

assigning unit assigns code converting units to a processing request from one of said

plurality of request-source task.

AAPA, however, discloses code processing units being requested to execute

processing (**AAPA, pg. 2, lines 9-14**).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the teachings of Penny with the teachings of AAPA for having the

plurality of request-source task units configured to request any of said plurality of code

converting units in a predetermined code converting unit group to perform a code

conversion of image data, and that assigning unit assigns code converting units to a

processing request from one of said plurality of request-source task in order to ensure

data is processed when needed and when able. That is, the request would ensure that

data is sent when the code converting units are available, and that data would not be

sent if the code converting units were not available. In this way, data would not be lost.

This increases user satisfaction.

Neither Penney nor AAPA disclose the plurality of code converting units

comprising at least one of a hardware-implemented code converting unit and a non-

transitory computer-readable medium.

Yaguchi, however, discloses code converting units constituted by software-

implemented code converting units for executing code conversion by software and

hardware-implemented code converting units for executing code conversion by

hardware (**Yaguchi, col. 18, lines 58-61**); and said assigning unit assigns said

software-implemented code converting units to the processing requests of the request-

source task units. (**Yaguchi, col. 19, lines 32-34**).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the teachings of Yaguchi with the teachings AAPA and Penney for

having code converting units constituted by software-implemented code converting units

for executing code conversion by software and hardware-implemented code converting

units for executing code conversion by hardware; and said assigning unit assigns said

software-implemented code converting units to the processing requests of the request-

source task units in order to execute data at high speed and in order to select the

optimum processor at processing time (**Yaguchi, col. 1, lines 54-63**).

In regard to claim 4, which depends from claim 1, the combination of Penney

and Yaguchi discloses wherein said predetermined code converting units constituted by

software-implemented code converting units for executing code conversion by software

and hardware-implemented code converting units for executing code conversion by

hardware (**Yaguchi, col. 18, lines 58-61, and AAPA, pg. 2, lines 9-14**); and when the

processing request is received from one of the plurality of request-source units, said

assigning unit assigns one of said software-implemented code converting units to the

task according to the request-source task unit the issued the processing request

(**Yaguchi, col. 19, lines 32-34, and AAPA, pg. 2, lines 9-14**).

4.   Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Penney in view of AAPA, as evidenced by Sasaki.

In regard to claims 7 and 13, Penney discloses an image processing method

(**Penney, Fig. 1, and col. 1, lines 49-52**) comprising:

a plurality of request-source task units (**Penney, Fig. 1, item 11**), the number of

which is greater than a predetermined number of code converting units (**Penney, col. 2,

lines 13-15**) and having priorities corresponding to respective tasks, (**Penney, col. 2,

lines 47-53, one of the outputs of the input matrix is assigned to one of the input**

sources, the Examiner interprets this source as having a high priority with the other sources having lower priority);

a priority processing determination step of determining whether the request-source task unit should be processed with priority (**Penney, col. 2, lines 47-53**), wherein each request-source task unit having a high priority reserves one of the predetermined number of code converting units in a predetermined code converting unit group (**Penney, col. 2, lines 19-22, and 47-53, the Examiner reads code converting units as belonging to their own group, i.e., one code converting unit for each group, support for a group consisting of one item is disclosed in Sasaki, [0032], line 1**), and each request-source task unit having a low priority competes for at least one of a plurality of non-reserved code converting units in code converting unit groups other than the predetermined code converting unit group (**Penney, Fig. 1, and col. 2, lines 47-57, one of item 14 is reserved, and there are more items 11 than there are items 14, accordingly, they would have to compete**), the number of non-reserved code converting units being less than the number of request-source task units having the low priority (**Penney, Fig. 1, there are more items 11 than there are items 14**); and

an assigning step of assigning:

i. when one of the plurality of request-source units having the high priority, the code converting unit reserved by the request-source task unit to a task corresponding to the request-source task unit (**Penney, col. 2, lines 47-57, resource manager 18 assures that one of the decoders I coupled to the output for a certain task**), and

ii. when one of the plurality of request-source units having the low priority and one of the plurality of non-reserved code converting units is an idle code converting unit, the idle code converting unit to the task corresponding to the request-source task unit that issued the processing request (**Penney, col. 3, lines 13-16, and 46-52, assigned as needed**).

Penney does not disclose a processing-request issuing step of issuing a processing request to a code converting unit by any request-source task unit in a predetermined code converting unit group; receiving the processing request and determining if the processing request issued by the of request-source task should be issued with priority; and that the assigning step assigns code converting units to a processing request from one of said plurality of request-source task.

AAPA, however, discloses code processing units being requested to execute processing (**AAPA, pg. 2, lines 9-14**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Penny with the teachings of AAPA for a processing-request issuing step of issuing a processing request to a code converting unit by any request-source task unit in a predetermined code converting unit group; receiving the processing request and determining if the processing request issued by the of request-source task should be issued with priority; and that the assigning step assigns code converting units to a processing request from one of said plurality of request-source task in order to ensure data is processed when needed and when able. That is, the request would ensure that data is sent when the code converting units are available,

and that data would not be sent if the code converting units were not available. In this

way, data would not be lost. This increases user satisfaction.

5.   Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Penney, AAPA, and Yaguchi, as evidenced by Sasaki.

        In regard to claims 10 and 16, which depend from claims 7 and 13,

respectively, neither AAPA nor Penney disclose wherein said predetermined number of

code converting units are constituted by software-implemented code converting units for

executing code conversion by software and hardware-implemented code converting

units for executing code conversion by hardware; and

        when the processing request is received from one of the plurality of request-

source units said assigning step assigns one of said software-implemented code

converting units to the task corresponding to the request-source task unit that issued

the request.

        Yaguchi, however, discloses code converting units constituted by software-

implemented code converting units for executing code conversion by software and

hardware-implemented code converting units for executing code conversion by

hardware (**Yaguchi, col. 18, lines 58-61**); and said assigning unit assigns said

software-implemented code converting units to the request-source task units. (**Yaguchi,

col. 19, lines 32-34**).

Moreover, AAPA discloses code processing units being requested to execute processing (**AAPA, pg. 2, lines 9-14**).

The combination would result in the limitations of claims 10 and 16.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Yaguchi with the teachings AAPA and Penney for having code converting units constituted by software-implemented code converting units for executing code conversion by software and hardware-implemented code converting units for executing code conversion by hardware; and said assigning unit assigns said software-implemented code converting units to the processing requests of the request-source task units in order to execute data at high speed and in order to select the optimum processor at processing time (**Yaguchi, col. 1, lines 54-63**).

6.   Claims 5-6, 11-12, and 17 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Penney, AAPA, and Yaguchi, in view of U.S. Patent Application Publication No. 2005/0047666 A1 to Mitchell et al. (hereinafter, Mitchell), as evidenced by Sasaki.

In regard to claims 5, 11, and 17, which depend from claims 4, 10, and 16, respectively, Penney discloses wherein said request-source task units having the high priority are classified into a first unit group processed and a second unit group (**Penney, col. 2, lines 62-64, the "advance assignment"**).

Neither Penney nor AAPA disclose wherein the first unit group is processed by said software-implemented code converting units and the second unit group processed by said hardware-implemented code converting units.

Yaguchi, however, discloses a first unit group being processed by software-implemented code converting units (**Yaguchi, col. 18, line 58 - col. 19, line 36, the first group is processing that requires more than a predetermined time, see specifically, Yaguchi, col. 19, lines 21-26, and lines 27-34**) and a second unit group processed by hardware-implemented code converting units (**Yaguchi, col. 18, line 58 - col. 19, line 36, the second group is processing that requires less than a predetermined time, see specifically, Yaguchi, col. 19, lines 21-26**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Yaguchi with the teachings Penney and AAP for having a first unit group being processed by said software-implemented code converting units, and a second unit group processed by said hardware-implemented code converting units in order to execute data at high speed and in order to select the optimum processor at processing time (**Yaguchi, col. 1, lines 54-63**).

Neither Yaguchi, AAPA, nor Penney specifically disclose the second unit group processed by said hardware-implemented code converting units <u>via said software-implemented code converting units</u>.

Mitchell, however, discloses tasks being processed by hardware-implemented code converting units via software-implemented code converting units (**Mitchell, Abstract, lines 9-13**).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the teachings of Mitchell with the teachings of Yaguchi, AAPA, and

Penney for having tasks being processed by hardware-implemented code converting

units via software-implemented code converting units in order to prepare data for non-

compliant hardware decoders (**Mitchell, Abstract, lines 11-13**).

In regard to claims 6 and 12, which depend from claims 5 and 11, respectively,

Yaguchi discloses wherein said hardware-implemented code converting units are

adapted so as to be used by the request-source task units of said second unit group

(**Yaguchi, col. 19, lines 21-26, processing that requires less than a predetermined

time is processed by hardware, accordingly, said hardware-implemented code

converting units are adapted so as to be used by the request-source task units of

said second unit group**).

Response to Arguments

7.   Applicants argue that the cited references do not disclose that each code

converting unit belongs to one of a plurality of code converting groups. *See*

Amendment, pgs. 9-10.

The Examiner has considered this argument carefully but does not agree.

In Penney, col. 2, lines 19-22, and 47-53, and Fig. 1, the Examiner reads each

code converting unit as belonging to its own group, i.e., one code converting unit for

each group. Support for a group consisting of one item is disclosed in Sasaki, [0032],

line 1.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ERIC A. RUST whose telephone number is (571)-270-

3380. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00

p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Benny Tieu can be reached on (571)-272-7490. The fax phone number for

the organization where this application or proceeding is assigned is 571-270-4380.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERIC A. RUST/

Examiner, Art Unit 2625

05/13/2011

/Benny Q Tieu/

Supervisory Patent Examiner, Art Unit 2625